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2013 ACC/AHA GUIDELINE RECOMMENDATION ON BLOOD CHOLESTEROL REVISITED: PERCENT LDL-C REDUCTION OR ATTAINED LDL-C LEVEL OR BOTH FOR PROGNOSIS?

Oral Contributions
Room 6B
Monday, March 16, 2015, 11:00 a.m.-11:12 a.m.

Session Title: Highlighted Original Research: Prevention and the Year in Review
Abstract Category: 21. Prevention: Clinical
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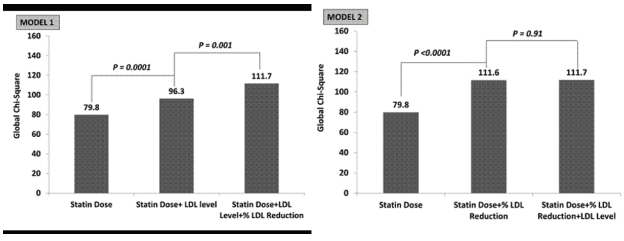
Background: The 2013 ACC/AHA guideline on the treatment of blood cholesterol recommends moderate to high intensity statins for patients with atherosclerotic vascular disease but departs from the traditional treat to target approach. Whether percentage LDL-C reduction or attained LDL-C levels add incremental prognostic value to statin dose is not known.

Methods: Patients in the TNT, SPARCL and IDEAL trials randomized to a statin arm were chosen. Primary outcome was major cardiovascular event. Incremental prognostic value was assessed by using a forward conditional Cox proportional hazards model. Two models were tested: Model 1: Step 1-Statin dose; Step 2-add attained LDL-C levels (at 3-month visit post randomization); Step 3-add % LDL-C reduction (from baseline). Model 2: Step 2 and 3 were reversed.

Results: Among 13,959 patients included in this study, % LDL-C reduction added incremental prognostic value over both statin dose and attained LDL-C levels (Figure). However, attained LDL-C level did not provide incremental prognostic value over statin dose and % LDL-C reduction (Global chi-square 79.8 to 111.6 to 111.7; P-value <0.0001 and 0.91 respectively) (Figure).



Conclusion: In patients treated with a statin, percent LDL-C reduction provides incremental prognostic value over statin dose and attained LDL-C levels. However, the attained LDL-C level does not provide additional prognostic value over statin dose and %LDL-C reduction thereby supporting the 2013 ACC/AHA recommendations.